

REMARKS

Status of the Claims

Claims 1-15 are pending in the present application.

Double Patenting

The Examiner has provisionally rejected claims 1-7 on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 15-20 of copending Application No. 11/269,809. As the rejection is a provisional rejection, no action is required by Applicants at this time. See MPEP 804, page 800-17.

37 CFR § 1.132 Declaration

Enclosed herewith is a 37 CFR § 1.132 Declaration of Toshihiro Ise. The Examiner is respectfully requested to review the enclosed Declaration of Toshihiro Ise as it provides strong evidence of patentability of the present invention.

The enclosed Declaration includes a comparative experiment and an explanation of the difference in emission mechanisms between the present invention and Akiyama et al. '589 (US 2002/0146589). In the enclosed Declaration, a comparative example is set forth, using the method and materials described in Akiyama et al. '589. When comparing external quantum efficiency, the present invention is unexpectedly superior. The comparative example in the enclosed Declaration strongly evidences that the prior art does not produce the results of the present invention.

Issues under 35 U.S.C. § 102

The Examiner has rejected claims 1-4 and 6-14 under 35 U.S.C. § 102(b) as being anticipated by Akiyama et al. '589. Applicants respectfully assert that the cited reference does not disclose each and every element of independent claim 1. Therefore, the cited reference does not anticipate nor render obvious claim 1.

As indicated above, the Examiner is respectfully requested to review the accompanying Declaration of Toshihiro Ise. As shown in the Declaration, the device of Akiyama et al. '589 results in an external quantum efficiency of less than 0.1%, whereas claim 1 recites an external quantum efficiency of 6% or more. As such, Akiyama '589 fails to disclose every feature of the instant invention and the device of claims 1-4 and 6-14 are not anticipated by Akiyama '589.

In view of the above, Applicants respectfully submit that the present invention is novel and nonobvious over the cited reference. Thus, withdrawal of the rejection is respectfully requested.

Issues under 35 U.S.C. § 103

- 1) The Examiner has rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Akiyama et al. '589 in view of Thompson et al. '219 (US 5,861,219).
- 2) The Examiner has also rejected claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Akiyama et al. '589 in view of Forrest et al. '360 (US 6,310,360).

Applicants respectfully traverse, and reconsideration and withdrawal of these rejections are respectfully requested.

As discussed above, Akiyama et al. '589 do not disclose each and every aspect of claim 1, from which claims 5 and 15 ultimately depend. Applicants respectfully submit that neither Thompson et al. '219 nor Forrest et al. '360 overcome the deficiencies of this reference.

To establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (See MPEP 2143.03). As discussed above, the combination of references fails to teach or suggest all the claim limitations of independent claim 1, and those claims dependent thereon. Therefore, a *prima facie* case of obviousness has not been established, and withdrawal of the instant rejection is respectfully requested.

Furthermore, the present invention has unexpected advantages in external quantum efficiency, as supported by the test data of the application and the enclosed Declaration.

As indicated above, the Examiner is respectfully requested to review the accompanying Declaration of Toshihiro Ise. As shown, the external quantum efficiency of Akiyama et al. '589 is less than 0.1%, which is far lower compared to the instant invention of 6% or more.

Relevant to this § 103(a) rejection, *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966) has provided the controlling framework for an obviousness analysis, wherein a proper analysis under § 103(a) requires consideration of the four *Graham* factors. One such factor includes the evaluation of any evidence of secondary considerations (e.g., commercial success; unexpected results). 383 U.S. at 17, 148 USPQ at 467. In this regard, Applicants respectfully submit that the present invention has achieved unexpected results, whereby such results rebut any asserted *prima facie* case of obviousness. *See In re Corkill*, 711 F.2d 1496, 226 USPQ 1005 (Fed. Cir. 1985). Also, the comparative showing need not compare the claimed invention with all of the cited prior art, but only with the closest prior art. *See* MPEP 716.02(b) and 716.02(e).

Thus, due to the unexpected results as achieved by the present invention, these rejections have been overcome. Reconsideration and withdrawal of these rejections are respectfully requested.

Applicants therefore respectfully submit that claims 5 and 15 clearly distinguish over the cited prior art.

In view of the above remarks, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad M. Rink, Reg. No. 58,258 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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Attachment: Executed Declaration by Mr. Toshihiro Ise